Amendments to the Specification

Please replace the paragraph beginning at page 3, line 11, with the following redlined paragraph.

Lymphocytes in the peripheral blood express a large number of different antigens on their outer plasma membranes many of which are receptors for growth factors, cell-cell interactions and immunoglobulins; molecules for cell adhesion or complement stimulation; enzymes and ion channels. A single systematic nomenclature has been developed to classify monoclonal antibodies against human leukocyte cell surface antigens known as the cluster of differentiation (CD) antigens (Kishimoto et al., 1997). Detailed information on CD antigens can be found at the NCBI web site (*see* Internet at ncbi.nih.gov/prow/cd/index_molecules). ~~http://www.ncbi.nlm.nih.gov/prow/cd/index_molecules.htm.~~ The expression of these cell-surface antigens can distinguish different types of mature blood cells found in the peripheral circulation.

Please replace the paragraph beginning at page 50, line 20, with the following redlined paragraph.

The array of antibodies is also constructed on a membrane or a coverslip. In this case, the antibodies are covalently linked to the membrane as duplicate spots in a two-dimensional matrix. The spots are arranged in a matrix such as but not limited to a 15.times.15 matrix. The antibodies are monoclonal and are specific for the cluster of differentiation (cluster designation) antigens (CD antigens) and myeloid (MY) antigens expressed on *leukemia* cells. Antibodies specific for LY antigens may also be included. Details of CD antigens are available at the NCBI web site (*see* Internet at ncbi.nih.gov/prow/cd/index_molecules) ~~http://www.ncbi.nlm.nih.gov/prow/cd/index_molecule.htm~~. The spots are of microscopic size and are produced by the application of a drop (.about.10 nanolitres) of antibody solution (e.g. 10 ^{F}g protein/ml) on designated portions of a membrane or glass surface such as a coverslip, first washed with a non-specific protein absorbent such as 30% w/v skim milk (Dutch Jug, Bonlac

Foods Ltd, Melbourne, Australia) and then rinsed. Other protein solutions and other brands of skim milk may also be employed. The antibodies may be covalently coupled to the solid support such as through amino groups of lysine residues, the carboxylate groups of aspartate or glutamic acid residues or the sulfhydryl groups of cysteine residues. The array of antibodies selectively binds cells from body fluids which express the respective antigens or may bind free antigens. A positive and/or negative control is included such as an antibody for surface molecules or soluble molecules known to be present in the sample. An example of one form of the assay device is shown in FIG. 3. The solid support is conveniently of similar size and shape to a microscope slide and may be constructed of glass or other polymeric material. In the figure shown, there are 40 duplicate, discrete spots, a total of 80 spots altogether. A wall around the microscope slide may be separately added or moulded with the slide and this facilitates retention of fluid material. The present invention extends to any other device capable of fulfilling the method of the present invention.

Please replace the paragraph beginning at page 55, line 17, with the following redlined paragraph.

(i) The cells or antigens are reacted with a reagent which covalently attaches fluorescent groups to amino or sulfhydryl groups on all proteins in the sample. Suitable fluorophores (Molecular Probes, *see* Internet at probes.com ~~http:www probes.com~~) available as protein labelling kits are Alexa 488 and 3-(4-carboxybenzoyl)-quinoline-2-carboxaldehyde (CBQCA) which may be excited at 488 nm using an argon laser. Alternatively, cells bound to an array are labelled with 5-chloromethylfluorescein diacetate (CMFDA), a membrane-permeant probe deacetylated by intracellular esterases to form fluorescent 5-chloromethylfluorescein. This product undergoes a glutathione S-transferase^{B}mediated reaction to produce a membrane-impermeant glutathione^{B}fluorescent dye adduct which then reacts with thiols on proteins and peptides to form conjugates. Fluorescently-labelled cells bound to an antibody array are quantified using a scanning fluorimeter (e.g. FluorImager or Typhoon, Molecular Dynamics, Inc) or a confocal microscope. Mild reaction conditions are preferably used so that the majority of

antigen binding sites are not affected. Different cells are labelled to different extents with different numbers of fluorophores. Cells are washed prior to reaction with the fluorophore.